

The Office Action

Claims 1-2 and **5-8** were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Doeselaar, et al. – U.S. Patent No. 5,717,576 in view of Kirma - U.S. Patent No. 5,126,507.

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Doeselaar, et al. and Kirma as applied to Claim 1 and further in view of Dubrow, et al. – U.S. Patent No. 4,900,877.

Claims 4, 9 and 11-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Doeselaar, et al. and Kirma in view of Prysner – U.S. Patent No. 6,225,565 B1.

Claim 10 was rejected under 35 U.S.C. § 103 as being unpatentable over Van Doeselaar, et al. in view of Kirma, Prysner and Dubrow, et al.

Claims 17, 18 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Doeselaar, et al. in view of Dubrow, et al. and Prysner.

Claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van Doeselaar, et al. in view of Dubrow, et al., Prysner and Kirma.

Remarks

This Amendment is responsive to the Office Action of **September 11, 2002**. Reexamination and reconsideration of **claims 1-20** is respectfully requested.

The Present Amendment

Claims 2, 5, 7 and 11 have been amended to address the informalities identified in the Office Action on page 2, paragraph 1.

The Present Claims Patentably Distinguish Over the References of Record

Claim 1 is directed to an enclosure comprising a housing and an opening that allows one or more cables to pass therethrough. **Claim 1** further recites a flexible cable shield having an inner surface formed of an electrically conductive flexible material and a second end being

adjustably closeable to closely surround one or more cables passing therethrough causing the inner surface of the flexible cable shield to contact the one or more cables. FIGURE 6 of the present application illustrates one embodiment where a flexible cable shield 125 is closeable at its end 135 surrounding a plurality of cables 600.

Claim 1 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Van Doeselaar, et al.** (the '576 patent) in view of **Kirma** (the '507 patent). The **Van Doeselaar** patent illustrates in FIGURE 2a, Faraday cages of boxes 32 and 34 electrically connected via a bundle of wires surrounded by a braided metal mesh 64 (see column 3, lines 46-50). The Office Action states, on page 3, that the **Van Doeselaar** patent does not disclose the second end of a flexible cable shield being adjustably closeable causing the inner surface of the flexible cable shield to contact one or more cables. The **Kirma** patent is used to cure this shortcoming. The **Kirma** patent teaches a flexible metal tube 4 having an undulated profile that serves as a cable duct (see abstract and column 2, lines 50-53).

As clearly shown in FIGURE 1 of the **Kirma** patent, the metal tube 4 is not adjustably closeable at any end causing the inner surface of the tube to contact the cables 1 therein. Rather, the ends of the metal tube 4 are connected to a bush 33 which is part of a junction element 3 (see column 3, lines 3-20). Although FIGURES 2, 3, 4, 8 and 13 show that the body of the tube is formed of two parts that can be opened and closed to allow access to the tube body, there is no teaching or suggestion in the **Kirma** patent that the ends of the metal tube are adjustably closeable as recited in independent **Claim 1**.

Furthermore, the **Kirma** patent fails to teach or fairly suggest an adjustably closeable end that causes the inner surface of a flexible cable shield to contact the one or more cables as recited in **Claim 1**. Rather, the **Kirma** patent teaches that the cable harness located on the inside of the tube is protected by a plastic braid 5 (see FIGURE 1) embracing the cables against mechanical stress, "especially against chafing at the inner walls of the profiled hollow tube." (see Column 4, lines 1-4). Therefore, the cables do not contact the inner surface of the metal tube 4 and the intent of the invention is that no contact exists. This is further evidenced in the embodiments of FIGURES 8 and 13 where the cables are bundled with cable ties 75 and 85 which prevent the cables from contacting the inner surface of the tube 70 and 80, respectively.

Column 4, lines 57-60 of the **Kirma** patent further state that the cable bundle **84** is, in this manner, protected against any type of contact, and thus against chafing and wear, at the walls of the cable channel. Therefore, the **Kirma** patent fails to teach or suggest an end of a flexible cable shield being adjustably closeable to closely surround one or more cables passing therethrough causing the inner surface of the flexible cable shield to contact the one or more cables as recited in **Claim 1**. Since the cited references fail to show all recited elements of **Claim 1**, the motivation to combine the references is moot.

The **Kirma** patent, thus, fails to cure the shortcomings of the **Van Doeselaar** patent and, individually or in combination, these references fail to teach or suggest **Claim 1**. Therefore, **Claim 1** patentably and unobviously distinguishes over the references of record and is in condition for allowance. Accordingly, dependent **Claims 2-8** are also in condition for allowance.

Independent **Claim 9** is directed to an enclosure comprising one or more walls, a cable opening, and a cable conduit. **Claim 9** further recites that the cable conduit includes an inner surface formed of a flexible electrically conductive material and an outer surface formed of a flexible electrically non-conductive material where the inner and outer surfaces cause the cable conduit to be resilient where the second end is adjustable to a plurality of sizes to closely surround one or more cables minimizing electromagnetic interference.

Independent **Claim 9** was rejected as being unpatentable over **Van Doeselaar, et al.** (the '576 patent) and **Kirma** (the '507 patent) in view of **Prysner** (the '565 patent). The Office Action, on page 6, states that **Kirma** teaches a cable conduit that is resilient where the second end is adjustable to a plurality of sizes to closely surround one or more cables. As explained previously, **Kirma** teaches a metal or plastic tube that encloses cables. Although the tube may be flexible due to its undulated profile, there is no teaching or suggestion that the tube is resilient as in present **Claim 9**. Furthermore, there is no teaching or suggestion that the end of the tube is adjustable to a plurality of sizes as recited in **Claim 9**. Rather, the ends of the tube **4** are configured to be secured at all ends, for example, to connector **2** and housing **32** in FIGURE 1. There is no teaching or suggestion that the ends are adjustable in size to closely surround one or more cables. As noted previously, the tube in the **Kirma** patent is formed of two (2) halves along its length, there is no teaching or suggestion which would lead one of ordinary skill in the

art to believe that the tube was resilient where the end is adjustable to a plurality of sizes as recited in **Claim 9**.

Since the **Kirma** patent fails to teach or suggest a required element in present **Claim 9**, the motivation to combine **Kirma** with the other references of record is moot. Therefore, the references of record individually or in combination fail to teach or suggest the features of **Claim 9** and **Claim 9** should now be in condition for allowance. Accordingly, dependent **Claims 10-16** also patentably distinguish over the references of record.

Independent **Claim 17** calls for an electromagnetic interference enclosure comprising, for example, an electrically conductive housing, a cable opening, a cable conduit having an open end and a securing end, one or more flaps formed at the securing end. **Claim 17** further recites that the cable conduit being resiliently openable and closeable to configure the open end of the cable conduit to a plurality of sizes and to closely surround and contact one or more cables passing therethrough.

Claim 17 was rejected as being unpatentable over **Van Doeselaar, et al.** in view of **Dubrow, et al.** and **Prysner**. The Office Action, on page 8, states that **Van Doeselaar** discloses one or more flaps of a cable conduit (64) being secured to the housing. As seen in FIGURE 2a in **Van Doeselaar**, wires are surrounded by a braided metal mesh 64. The braided metal mesh 64 is connected to the boxes 32 and 34 via connectors 66 (only one shown) (see Column 3, lines 49-52). Applicant respectfully submits that **Van Doeselaar** fails to disclose how the metal mesh 64 is secured to the connector or boxes 32, 34. Thus, **Van Doeselaar** fails to teach or suggest one or more flaps as recited in **Claim 17**.

The Office Action on page 8 further states that **Van Doeselaar** discloses a cable conduit being resiliently openable and closeable to configure the open end of the cable conduit to a plurality of sizes and to closely surround and contact one or more cables passing therethrough. To the contrary, **Van Doeselaar** only discloses that both ends of mesh 64 and cable trays 36, 38 (FIGURE 2a and 2b, respectively) are connected to boxes 32 and 34. There is no discussion of an open end or a cable conduit being resiliently openable and closeable to configure an open end to a plurality of sizes. Although not applied to **Claim 17**, the **Kirma** patent was applied to other claims with similar elements. For similar reasons stated above, **Kirma** also fails to teach or

suggest a cable conduit that is resiliently openable and closeable to a plurality of sizes or a conduit that closely surrounds and contacts one or more cables passing therethrough.

Since the references of record individually or in combination fail to teach or suggest the recited elements of **Claim 17**, **Claim 17** patentably and unobviously distinguishes over the references of record. Accordingly, **Claims 18-20**, dependent therefrom, also patentably distinguish over the references of record and are in condition for allowance.

Regarding dependent **Claims 3, 10 and 18** which recite that the electrically conductive material of the cable shield or cable conduit is a metallized fabric or nylon, the Office Action applies the **Dubrow, et al.** patent (4,900,877). **Dubrow** is directed to a shielding gasket that is made of a metallic structure that may be a woven or non-woven wire fabric (column 3, lines 43-45). Since **Dubrow** is directed to a sealing gasket, Applicant finds no suggestion, and thus no motivation, to use this type of material in a cable shield or cable conduit as in the present claims. Indeed, there is no particular motivation for such a combination since none of the references of record teach or suggest an enclosure with a cable conduit as recited in the independent claims. Therefore, **Claims 3, 10 and 18** patentably and unobviously distinguishes over the references of record.

Conclusion

For the reasons set forth above, **claims 1-20** patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,



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Marked Up Version of Amended Claims:

1. (Amended) An enclosure comprising:

a housing that reduces electromagnetic interference;

an opening in the housing to allow one or more cables to pass therethrough; and

a flexible cable shield formed as a conduit and having a first and a second end, the flexible cable shield having an inner surface formed of an electrically conductive flexible material that reduces electromagnetic interference, the first end being secured to the enclosure and enclosing the opening, the second end being adjustably closeable to closely surround one or more cables passing therethrough causing the inner surface of the flexible cable shield to contact the one or more cables.

2. (Amended) The enclosure as set forth in claim 1 wherein the housing includes at least one wall [being] of an electrically conductive material.

5. (Amended) The enclosure as set forth in claim 1 further including:

a gasket positioned around the opening and in contact with the first end of the flexible cable shield; and

a bracket positioned against the gasket and being secured to the housing causing the gasket and the first end of the flexible cable shield to be compressed against the housing.

7. (Amended) The enclosure as set forth in claim 1 wherein the housing includes an inner side and an outer side, and the first end of the flexible cable shield being secured to the inner side and the second end of the flexible cable shield being disposed on the outer side.

9. (Amended) An enclosure for shielding electromagnetic interference comprising:

one or more walls configured to enclose an electronic device, the one or more walls being electrically conductive to shield electromagnetic interference;

a cable opening formed through one wall of the one or more walls to allow one or more cables to pass through; and

a cable conduit having a first and second end and an inner and outer surface, the first end being secured to the one wall and enclosing the cable opening, the inner surface being formed of a flexible electrically conductive material, the outer surface being formed of a flexible electrically non-conductive material, the inner and outer surfaces causing the cable conduit to be resilient where the second end is adjustable to a plurality of sizes to closely surround one or more cables minimizing electromagnetic interference.

11. (Amended) The enclosure as set forth in claim 9 wherein the cable conduit is flexibly closeable at a plurality of points along its length. [.]